Fact Sheet

UNITED STATES AIR FORCE

377TH AIR BASE WING (AFMC)
Office of Public Affairs, Kirtland Air Force Base, NM 87117 505-846-5991

SPACE Flight

The Air Force Research Laboratory La Luz Academy's Students Planning And Conducting Engineering Flight provides a unique learning opportunity for high school students. Teams of students structure and perform a real-world research and development project using a systems engineering approach.

The La Luz Academy is on Kirtland Air Force Base, New Mexico.

Teachers, volunteer scientists and engineers from AFRL and elsewhere act as technical advisors for the student teams. Each spring, student teams present an annotated briefing of their project accomplishments at the annual SPACE Symposium.

The kickoff briefing is the formal beginning of the SPACE Flight for the school year. Student teams, teachers, and technical advisors meet and develop a strategy for working on their research and development project. Student teams are briefed on the systems engineering methodology they will be following to complete their project, including their responsibilities at each major step.

An overview of pertinent AFRL safety and security policies is given, and student teams get an opportunity to develop a context diagram and operational model of their project.

At the initial review, around November or December, student teams present a briefing on their project to a SPACE

Review Team of volunteer scientists and engineers from AFRL and other organizations. The briefing includes a context diagram, operational model, component diagram, a team task breakdown structure for the project, a list of materials needed, and a timeline in Gantt format.

The SPACE Review Team assesses the viability of the students' plan, given time and resource constraints, helps the students refine their objective and plan to ensure the students' goals are realistic and make action-plan recommendations for the student teams.

At the critical review, around February or March, student teams present an updated briefing on their project to the SPACE Review Team. Students are asked critical questions about their progress and anticipated project completion. The SPACE Review Team then makes recommendations as to whether the project should continue, be revised, or scrapped.

In April, student teams who have passed the critical reveiw present an annotated briefing and poster display of their research and development project accomplishments at the annual SPACE Symposium.

The audience at this event comprises other SPACE Flight student teams, teachers, volunteer advisors, the SPACE Review Team, scientists and engineers, dignitaries, parents and family, the media, and Middle School Flight students. The SPACE Review Team reviews each team's presentation and demonstration, provides feedback to the teams, and makes recommendations for continuing the project, if applicable.

Student teams and their teachers have several options when selecting their research and development project topic. They can select a structured robotics project using the Boe-Bot® robot kits as an extension of the basic concepts introduced in the eighth grade Introduction to Systems Engineering Flight; or, they can take a more free-form approach, selecting any research and development topic they choose. For the latter, student teams are encouraged, but not required, to select topics that allow dual participation in activities such as the Team America Rocketry Challenge, New Mexico Supercomputing Challenge, or New Mexico RoboRave International.

Teachers are asked to recruit students for participation in the SPACE Flight who have definite education and career plans, as well as those who haven't decided yet on their plans for the future. Student SPACE Flight participants will be given preference for intern opportunities that arise, including summer hire programs. Teachers can elect to implement the flight as part of the classroom curriculum or as an extra-curricular activity.

For more information, contact AFRL La Luz Academy at 505-846-8042 or go to: http://www.vs.afrl.af.mil/TechOutreach/TT/K-12.aspx

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